

Abstract

One of the most significant safety concerns in the automation of extracorporeal blood treatments such as dialysis is the risk of blood leakage. Extracorporeal blood treatment systems draw blood at such a high rate that a loss of integrity in the blood circuit can be serious. There are a number of mechanisms for detecting and preventing leaks, but none is perfect. This tends to limit the use of such equipment in unsupervised settings, such as the home will be limited. Some leak detection schemes can be made sensitive enough to detect the barest of leaks, but when this is done, they result in too many false positives. The invention combines information from multiple inputs to enhance sensitivity in leak detection and reduce the problem of false positives.